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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,249	12/19/2001	Satoshi Itaya	01827/LH	7377

1933 7590 12/01/2005

FRISHAUF, HOLTZ, GOODMAN & CHICK, PC
220 5TH AVE FL 16
NEW YORK, NY 10001-7708

EXAMINER

RUDOLPH, VINCENT M

ART UNIT PAPER NUMBER

2624

DATE MAILED: 12/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/025,249

Applicant(s)

ITAYA, SATOSHI

Examiner

Vincent M. Rudolph

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-10, 13 and 14 is/are rejected.
- 7) ☒ Claim(s) 4-5 and 11-12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

Claims 4-5 and 11-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 5-6, 8, 10 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable by Asanuma ('896).

Regarding claim 1, Asanuma ('896) discloses an image forming apparatus (See Figure 1, Element 1) that includes a detecting section (a control device, See Figure 1, Element 21; Col. 8, Line 4-14) which detects a lifetime of an expendable (toner in a toner cartridge, See Col. 8, Line 4-7) used to form images is expiring based on only one parameter (a cartridge is expiring when any one of a plurality of parameters is met, See Col. 11, Line 45-47). It also has a control section (a processing section, See Figure 2, Element 23; Col. 8, Line 45-51) which disregards a subsequent detection by the detecting section that the expendable is expiring until the counted used amount reaches a prescribed value (the printing state is still enabled to judge one of the other conditions

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exists, and only when the operation time of the expendable exceeds a predetermined time is the expendable considered to be expiring, See Col. 12, Line 15-26).

Asanuma ('896) does not disclose having the counting section keep track the used amount of the expendable from a time when the detecting section detects that it is expiring, but does have the counting section keep track of the time from when the detection section detects the lifetime of the expendable is expiring (See Col. 12, Line 20-26).

It would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to modify Asanuma's counting section to count the amount used instead of time because the amount used in any period can vary and the correct amount of remaining toner can be established and used.

Regarding claim 3, Asanuma ('896) describes a display section (display device See Figure 2, Element 22) displaying a message when the detecting section makes the subsequent detection that the lifetime of the expendable is expiring (a message is displayed on the display screen when another one of the conditions is satisfied, See Col. 12, Line 15-26).

Regarding claim 6, Asanuma ('896) discloses the expendable comprises a toner contained in a toner cartridge (a toner cartridge, which uses toner within it, See Fig. 3, Element 9; Col. 7, Line 31-32).

Regarding claims 8, 10 and 13, the rationale provided in rejection of claims 1, 3 and 6 are incorporated herein respectively. In addition, the apparatus of claims 1, 3 and 6 performs the method steps of claims 8, 10 and 13, respectively.

Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asanuma ('896) in view of Suyehira (Pg. Pub. # 2002/0172520 A1).

Regarding claims 2 and 9, Asanuma ('896) discloses an image forming apparatus that detects whenever the toner is low, a display message appears notifying the user know the toner cartridge needs to be replaced soon (See Col. 12, Line 15-20).

Asanuma ('896) does not disclose an interface to be connected communicably to a computer installed at a seller of the expendable so that an order is automatically placed with the computer when the detecting section detects that the lifetime of the expendable is expiring.

Suyehira ('520) discloses an image forming apparatus an orderer which receives a notice from an interface connected communicably to a computer installed at a seller of the expendable (a detector, (See Figure 1, Element 120) is included within the printer that is connected communicably to the computer and detects when a replaceable component (an expendable) is low, See Page 3, Paragraph 0034) so that an order for the expendable is automatically placed when it is detected that the expendable is low (the orderer (See Figure 1, Element 124) can either automatically contact the vendor system via the Internet using a browser stored in the printer memory and place an order for another toner, which then stores the order tracking information, such as shipping and received date, item number, and other reliable data, into memory, or contact the vender indirectly through the host computer (See Paragraph 0035 and 0036).

It would have been obvious to a person of ordinary skill in the art at the time of the invention by applicant to have a system for detecting the expiring toner level such as

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the one described by Asanuma ('896). This addition would not only display a warning the toner is low, but also have the capability to place an order for a replacement when it reaches a predetermined level, such as the method described by Suyehira ('520). This would have been obvious because it would reduce the chance the expendable fluid could expire before it is replaced.

Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asanuma ('896) in view of Garr ('420).

Asanuma ('896) describes an image forming apparatus having built-in memory that stores the count sheet value, total operation time, toner cartridge related operation time, and toner replenishing time, which relate to the amount of replenished and remaining toner (See Col. 8, Line 39-51; Col. 10, Line 10-13).

Asanuma ('896) fails to detail a method to keep track of the amount of toner used within the cartridge.

Garr ('420) discloses a method that not only keeps track of the total pages printed for a cartridge, but also tracks the amount of toner used per job, which can be used to estimate the number of pages to print remaining in the toner cartridge (See Col. 17, Line 65-Col. 18, Line 6).

It would have been obvious to a person of ordinary skill in the art at the time of the invention by applicant to not only disclose the amount of toner remaining and replenished, as described by Asanuma ('896), but also a method keeping track the amount of toner used within the cartridge, such as the one disclosed by Garr ('420), to

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provide the amount of toner used and available after each print in order to calculate an estimated number of pages remaining.

Response to Arguments

Applicant argues that Asanuma ('896) does not explicitly teach or fairly suggest that the lifetime of the expendable is expiring based on only one parameter. It is pointed out that Asanuma ('896) does disclose this. In Col. 11, Line 46-47, Asanuma ('896) discloses that when any ONE of the conditions, or parameters, are met, the process cartridge is expiring.

Also, the applicant argues that Asanuma ('896) does not teach or suggest a counting section of the expendable when it is determined that it is expiring. Asanuma ('896) does teach this for both expendables (toner cartridge and a drum). Whenever toner cartridge is expiring from a time that the detecting section detects that its lifetime is expiring, it is able to maintain operation until a predetermined total operation time is exceeded. Also, a drum is determined to be expiring if it's recording sheets count value (G) is equal to or greater than 60K.

Finally, the applicant argues that Asanuma ('896) does not disclose a subsequent detection that the lifetime of the expendable is expiring. Asanuma ('896) discloses a subsequent detection is made, such as one of the other conditions, for the toner cartridge. As a result, these subsequent detections are disregarded until the counted used amount, the total operation time, has reached its prescribed value, at which time the expendable is considered that its lifetime is expiring.

On the other hand, a subsequent detection is not made for a drum. Once the count value has reached a preset value, there is no other detection determining it is expiring. Thus, the prior art cannot meet the claimed limitation of the objected claims mentioned above and would be allowed if written in independent form.

Based on these facts, this action is made final.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent M. Rudolph whose telephone number is (571) 272-8243. The examiner can normally be reached on Monday through Friday 8 A.M. - 4:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on (571) 272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vincent M Rudolph
Examiner
Art Unit 2624


MARK ZIMMERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600